

**Title of Intervention:** Open Airways for Schools

**Website:** <http://www.lungusa.org/lung-disease/asthma/in-schools/open-airways/open-airways-for-schools-1.html>

**Intervention Strategies:** Group Education, Supportive Relationships, Individual Education, Environments and Policies

**Purpose of the Intervention:** To increase knowledge of asthma and treatments and improve self-management in children with asthma

**Population:** Elementary school children with asthma

**Setting:** Elementary schools in Detroit, MI; school-based

**Partners:** School administrators

**Intervention Description:**

- **Group Education:** The program elements included the "Open Airways for Schools" disease management training for children adapted to local needs. The Open Airways program consisted of six 45-minute sessions offered once per week. Small groups of children learned new asthma management skills. The session topics include basic information about asthma, how to recognize and respond to asthma symptoms, using asthma medication and deciding when to seek help, how to keep physically active, identifying and controlling triggers to minimize asthma symptoms and handling problems related to asthma and school. The curriculum incorporated an interactive teaching approach using group discussions, stories, games and role-play to promote children's active involvement in the learning process. The program focused on the child's independent actions as self-managers, emphasizing the child's responsibility for recognizing asthma symptoms and initiating a plan on action.
- **Supportive Relationships:** Children without asthma learned to develop empathy for children with asthma and enhanced their understanding of asthma. Children with asthma were asked to work on intervention homework assignments with their parents. Parents were invited to a question and answer session. School principals and counselors were oriented to asthma and control strategies. Janitors were given suggestions regarding potential environmental triggers to asthma symptoms and practical means of fixing them.
- **Individual Education:** Tailored asthma action plans were developed for each child.
- **Environments and Policies:** The school requested that children with asthma provide a copy of their asthma action plan.

**Theory:** Not mentioned

**Resources Required:**

- **Staff/Volunteers:** Facilitators
- **Training:** Not mentioned
- **Technology:** Not mentioned
- **Space:** Classroom
- **Budget:** Not mentioned
- **Intervention:** Open Airways for Schools curriculum, handouts, homework assignments, asthma action plans
- **Evaluation:** Questionnaire, interview protocol, access to schools records

**Evaluation:**

- **Design:** Randomized controlled trial
- **Methods and Measures:**
  - Telephone interviews assessed asthma symptoms and management.
  - Review of schools records determined number of absences and grades.

**Outcomes:**

- Short Term Impact: Not measured
- Long Term Impact: The intervention group experienced a significant decline in daytime symptoms, increase in parental asthma management and decrease in school absenteeism. Only children with severe asthma showed a decrease in nighttime symptoms.

**Maintenance:** Not mentioned

**Lessons Learned:** Programs provided periodically over the course of elementary school, as children mature and new challenges arise, may help them and their families manage the disease.

**Citation(s):**

Clark, N. M., R. Brown, et al. (2004). "Effects of a comprehensive school-based asthma program on symptoms, parent management, grades, and absenteeism." *Chest* 125(5): 1674-9.

Clark, N. M., R. Brown, et al. (2002). "Issues in identifying asthma and estimating prevalence in an urban school population." *J Clin Epidemiol* 55(9): 870-81.

Joseph, C. L., S. Havstad, et al. (2005). "Effect of asthma intervention on children with undiagnosed asthma." *J Pediatr* 146(1): 96-104.

**Additional examples of this intervention:**

Velsor-Friedrich, B., T. D. Pigott, et al. (2004). "The effects of a school-based intervention on the self-care and health of African-American inner-city children with asthma." *J Pediatr Nurs* 19(4): 247-56.

Bruzzese, J. M., L. B. Markman, et al. (2001). "An evaluation of Open Airways for Schools: using college students as instructors." *J Asthma* 38(4): 337-42.